

Listing of Claims:

This Listing of Claims replaces all the prior listings of claims.

1. (CURRENTLY AMENDED) A method for culturing primary hepatocytes comprising plating primary hepatocytes in the presence of an anti-oxidant(s) and a second agent, wherein said second agent is (1) a functional inhibitor of an enzyme that generates reactive oxygen and reactive nitrogen species, (2) an agent that directly inhibits the reactive oxygen or the reactive nitrogen species, or (3) an agent that increases intracellular glutathione and culturing said primary hepatocytes for at least five days, wherein said primary hepatocytes maintain function to metabolize xenobiotics or cytochrome P450 gene expression, ~~or wherein said primary hepatocytes display fenestration, bile canniculi or binucleation~~ for at least five days.
2. (CURRENTLY AMENDED) The method of claim 1, wherein the anti-oxidant is tocopherol succinate or a hydroxyl radical scavenger ~~of the hydroxyl radical~~.
3. (ORIGINAL) The method of claim 2, wherein the hydroxyl radical scavenger is mannitol.
4. (CURRENTLY AMENDED) The method of claim 1, wherein the second agent is a glutathione precursor or a nitric oxide inhibitor ~~an inhibitor of nitric oxide~~.
5. (PREVIOUSLY PRESENTED) The method of claim 4, wherein the glutathione precursor is 2-oxothiazolidine-4-carboxylate.
6. (CURRENTLY AMENDED) The method of claim 4, wherein the second agent is the nitric oxide inhibitor and is N^G -methylarginine, wherein "G" is a guanidine moiety in a formula
$$H_2N^G-C-NHCH_2CH_2CH_2CH(NH_2)CO_2H.$$

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NH₂
7. (CURRENTLY AMENDED) The method of claim 1, wherein the anti-oxidant is tocopherol succinate and the second agent is 2-oxothiazolidine-4-carboxylate ~~and tocopherol succinate~~.
8. (CURRENTLY AMENDED) The method of claim 1, wherein the anti-oxidant is mannitol and the second agent is N^G -methylarginine, wherein "G" is a guanidine moiety in a formula $H_2N^G-C-NHCH_2CH_2CH_2CH(NH_2)CO_2H$ ~~and mannitol~~.

NH₂

9. (NEW) The method of claim 1, wherein the cultured primary hepatocytes are further exposed to a candidate compound for more than 3 days.
10. (NEW) The method of claim 1, wherein the cultured primary hepatocytes are further exposed to a candidate compound for more than 5 days.
11. (NEW) The method of claim 1, wherein the cultured primary hepatocytes are further exposed to a candidate compound for more than one week.
12. (NEW) The method of claim 1, wherein the cultured primary hepatocytes are further exposed to a candidate compound for more than two weeks.
13. (NEW) The method of claim 1, wherein the cultured primary hepatocytes are further exposed to a candidate compound for more than one month.
14. (NEW) The method of claim 9, 10, 11, or 13, wherein the candidate compound is a drug candidate.
15. (NEW) The method of claim 1, wherein the cultured primary hepatocytes are further exposed to hepatitis after 5 days in culture.